

EXHIBIT 10

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Expert Report

In Reference to:

Wadsworth v. Jetson et al

by

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Berkeley Engineering and Research, Inc.
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Report Submitted to:

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remaining cells are largely intact. Based on BEAR's prior experience with testing lithium-ion batteries, including 18650, a ruptured cell is more consistent with an internal short resulting in a cell fire.

The difference in cell condition is consistent with cells 4 and 10 experiencing an internal short with thermal runaway and the other cells being damaged due to external heat. As shown in **Figure 7** above, cells 4 and 10 are diagonally opposite of each other within the battery pack – cell 4 is on the top and cell 10 is on the bottom. In addition to the rupture condition, the difference in the ruptured cell locations makes it unlikely that external heat would cause corresponding selective damage.

The subject board and model were certified to the UL 2272 standard. As noted by the CPSC in their hoverboard safety alert, certification to UL 2272 is not a guarantee against a battery fire hazard. The advice to not "...charge these devices unattended, especially overnight" is absent from the Jetson user manual.³ When interviewed by Detective Sheaman, Mr. Wadsworth described that the children occasionally left the subject board plugged in for extended periods of time.

A more detailed root cause analysis may be performed after additional documentation has been provided for the Plasma board, battery pack, and battery cells (such as FMEAs, discussed below, product design documentation, and test reports).

6.0 Design, FMEA, and Risk Assessment

The design risk assessment method typically used for industrial equipment and consumer products is termed Failure Modes and Effects Analysis (FMEA). The method was developed in the 1940s by the U.S. Armed forces and formalized in 1949 with the introduction of Military Procedures document (MIL-P) 1629, "Procedures for Performing a Failure Mode Effect and Criticality Analysis." The objective of the method was to systematically list, rank, classify and assess failures according to their effect on mission success and the safety of personnel and equipment. It was later adopted by numerous industries and the Apollo Space Program in its efforts to put a man on the moon. In the late 1970s Ford Motor Company brought the FMEA method to the automotive industry in response to the safety and regulatory issues resulting from the Pinto affair.⁴ In the 1980s, and 1990s, the FMEA method spread to industry equipment, consumer products (e.g. bicycles, computers, heat exchangers, etc.) and manufacturing systems and processes.

Once hazards or risks are known, the first and most desirable method in controlling the risk should be to design it out. The second method is to guard against the hazard, but only if the first method (design it out) is deemed unfeasible. The last and least desirable method is to

³ Deposition of Sam Husain, pages 41 – 47, Exh 50, Exh 54.

⁴ Kenneth W. Dailey, THE FMEA POCKET HANDBOOK at 8 (2004). Effective FMEAs, by C.S. Carlson, John Wiley & Sons, 2012.

It is good engineering practice to perform such an analysis not just for machinery, but for any device that is intended to have an operator/user and can pose hazards for the operator/user.

Jetson should have conducted an FMEA or other Risk Assessment to eliminate unnecessary risks as part of their design process.

7.0 Conclusions and Opinions

These conclusions and opinions are provided to a degree of engineering certainty and are subject to change if and when new information becomes available.

1. Careful and prudent manufacturers and distributors of consumer products should perform competent FMEAs or similar risk assessments to eliminate or reduce potential dangers associated with their products. It appears unlikely that Jetson performed a competent risk assessment for the subject hover board.
2. Inspection and analysis of the subject board and cells indicates the ruptured cells were more likely caused by an internal short rather than external heating.
3. Internal cell shorting can result in cell fires which is consistent with other experts' findings of the fire origin at the subject board location.
4. The subject incident corresponds to the CPSC Safety Alert regarding the risk of hoverboard fires and leaving the board on the charger for extended periods of time.